

Title (en)
ACTIVELY COOLED COIL

Title (de)
AKTIV GEKÜHLTE SPULE

Title (fr)
BOBINE À REFROIDISSEMENT ACTIF

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Application
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Abstract (en)
[origin: WO2020001682A1] The invention relates to a coil system comprising a first coil with a large number of planar coils (1-6) which are layered one above the other. In order to increase the energy density in a coil system of this kind, provision is made • for in each case two planar coils (1-6) which are situated directly one above the other to be vertically layered one on the other with a lateral offset in such a way that, at least in sections, in each case one turn of a first planar coil (1) and two turns of a second planar coil (2) which is arranged directly above the first planar coil are arranged with a partial overlap, • for the coil system to comprise a passive conductor track structure (7) which is DC-isolated from all current-carrying planar coils (1-6) of the coil system and has a large number of conductor tracks (23) which are layered one on the other and form a first comb-like structure, • for the first comb-like structure, at at least one edge region of the first coil, to engage into a second comb-like structure which is produced by the lateral offset of the outer turns of the planar coils (1-6) which are situated one above the other, and • for the lateral insulation gap (15) of the outer turn of each planar coil (1-6) from the passive conductor track structure (7) to be dimensioned in such a way that it causes base insulation of the first coil in relation to the passive conductor track structure (7).

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